

AMENDMENTS TO THE CLAIMS

Please further amend claim 16 as follows:

16. (Currently Amended) A computer readable storage medium storing program code for causing a computer to estimate, based on an electromagnetic field observed outside a scalp, a position of a current source as a source of said electromagnetic field existing in a brain, the program code causing the computer to perform a method comprising the steps of:

receiving measurements of an observed electromagnetic field observed outside a scalp;
setting, in a computer simulation of the brain, a plurality of computer simulated curved surfaces having depths from brain surface different from each other and shapes not intersecting with each other, and setting lattice points on each of said computer simulated curved surfaces;

automatically estimating, on each of said computer simulated curved surfaces, a current distribution for recovering said observed electromagnetic field, wherein

said step of automatically estimating a current distribution includes a step of setting, when said current distribution is estimated in accordance with variational Bayesian estimation, a hierarchical prior distribution representing a localized condition of said current source in said variational Bayesian estimation;

based on an expansion of the current distribution estimated on each one of said computer simulated curved surfaces and a difference between an electromagnetic field recovered based on said current distribution and said observed electromagnetic field, selectively identifying one computer simulated curved surface among said plurality of computer simulated curved surfaces as a true curved surface on which said current source exists, so that said expansion and said difference attain relative minimums at said identified computer simulated curved surface; and

outputting a position corresponding to said identified computer simulated curved surface as the position of said current source[[, wherein]].